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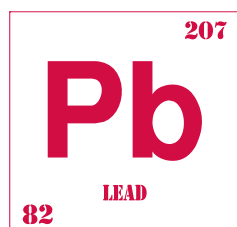
HAZARD ALERT

Occupational Safety and Health Division

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Health Hazards Special Emphasis Program

In 2006, the N.C. Department of Labor launched a health hazard special emphasis program for several chemicals that can have serious health effects: lead, silica, asbestos, isocyanates and styrene. As part of the emphasis program, OSH increased the number of inspections in industries that may use these chemicals. The following is a brief summary of those chemicals and their effects. If your company has a process that includes one or more of these chemicals, please familiarize yourself with—and consider taking advantage of—some of the resources available to help you eliminate these hazards.



Lead is a heavy metal that is highly toxic to humans and a leading cause of workplace illness. The U.S. Occupational Safety and Health Administration has set as a high priority the elimination of lead hazards in the workplace. Occupational exposure often occurs when air contaminated with lead dust or fumes is inhaled

and absorbed in the body. Lead also can be absorbed through the digestive system if ingested. Although lead inhalation is more common, ingestion is most likely to occur when handling food, cigarettes, chewing tobacco or makeup with hands contaminated with lead dust. Chronic overexposure to lead may result in severe damage to the blood-forming, nervous, urinary and reproductive systems. In most cases, exposed employees will not become symptomatic until the degree of poisoning has been extensive and has caused permanent damage. General procedures for particulate control can be used to help reduce exposure to lead. Particular attention should be paid to housekeeping and hygiene practices as specified in OSHA standard *29 CFR 1910.1025* and *29 CFR 1926.62*. Additional information on hazard recognition and control can be found at www.osha.gov/SLTC/lead/.

At least 1.7 million U.S. workers are exposed to respirable crystalline **silica** in a variety of industries. The most severe exposure to crystalline silica results from abrasive blasting, which is done to clean and smooth irregularities from molds, jewelry and foundry castings, to finish tombstones, to etch or frost glass, or to remove paint, oils, rust or dirt from objects that are going to be repainted or need other treatment. Exposure to silica dust also occurs in cement and brick manufacturing, asphalt pavement manufacturing, china and ceramic manufacturing, and the tool and die, steel and foundry industries. Crystalline silica is used in manufacturing, household abrasives, adhesives, paints, soaps and glass. Silicosis, an



irreversible but preventable disease, is the illness most closely associated with occupational exposure to the material, which also is known as silica dust. Occupational exposure to respirable crystalline silica is associated with the development of silicosis, lung cancer, pulmonary tuberculosis and airways diseases. Exposure may also be related to the development of autoimmune disorders, chronic renal disease and other adverse health effects. Permissible exposure limits can be found in *29 CFR 1910.1000 Table Z-3* and *29 CFR 1926.55 Appendix A*. Additional information on hazard recognition and control, can be found at www.osha.gov/dsg/topics/silicacrystalline/.

What can employers/employees do to protect against exposure to crystalline silica?

- ♦ Replace crystalline silica materials with safer substitutes whenever possible.
- ♦ Provide engineering or administrative controls, where feasible, such as local exhaust ventilation and blasting cabinets. Where necessary to reduce exposure below the permissible exposure level (PEL), use protective equipment or other protective measures.
- ♦ Use all available work practices to control dust exposure, such as water sprays.
- ♦ Wear only a N95 NIOSH certified respirator if respirator protection is required. Do not alter the respirator. Do not wear a tight-fitting respirator with a beard or mustache that prevents a good seal between the respirator and the face.
- ♦ Wear only a Type CE abrasive-blast supplied-air respirator for abrasive blasting.
- ♦ Wear disposable or washable work clothes and shower if facilities are available. Vacuum the dust from your clothes, or change into clean clothing before leaving the work site.
- ♦ Participate in training, exposure monitoring, and health screening and surveillance programs to monitor any adverse health effects caused by crystalline silica exposure.
- ♦ Be aware of the operations and job tasks creating crystalline silica exposure in your workplace environment, and know how to protect yourself.
- ♦ Be aware of the health hazards related to exposure to crystalline silica. Smoking adds to the lung damage caused by silica exposure.